* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]Digital player apparatus [, such as a digital memory player] by which this invention was comparatively provided with the desorbed type memory of small capacity, such as a memory card and a memory stick, Digital filing apparatus, such as a personal computer provided with comparatively mass built-in memories, such as a hard disk, connecting mutually with a USB cable -- the digital filing apparatus from digital player apparatus -- or it is related with the system which can transmit a music content from digital filing apparatus to digital player apparatus.
[0002]
[Description of the Prior Art]Connecting a personal computer with a digital memory player, and transmitting the digital data of two or more musical pieces to a digital memory player from a personal computer conventionally, is performed. In this case, since there is a limitation in the memory of a digital memory player at capacity, the user needs to advance selection of a musical piece, and transmission, caring about the data volume of the musical piece used as a transmission plug until the memory of a digital memory player fills.
[0003]By the way, since the memory of a digital memory player is expensive and it is difficult for a user to own many memories, About the memory which reproduced the musical piece stored repeatedly and in which the interest about those musical pieces faded, after eliminating all the data, a using form [say / storing in this memory the digital data of two or more musical pieces which are newly pleasing] is common.
[0004]
[Problem(s) to be Solved by the Invention]However, the digital data of two or more musical pieces stored in the memory in the past again, There is a case where he would like to transmit to a digital memory player from a personal computer, to store in a memory, and to reproduce

these musical pieces, and in such a case a user, Selection of a musical piece and transmission needed to be advanced caring about the data volume of the musical piece used as a transmission plug like the time of storing the digital data of the musical piece of these plurality in a memory before, until the memory of the digital memory player filled. In particular, with a digital memory player and a personal computer, since data systems may differ and the compression ratio of data may change with music, it is necessary to advance transmission, checking one capacity at a time. Therefore, there was a problem that data transfer work was very complicated. Then, the purpose of this invention is to provide the music contents transfer system which can simplify data transfer work.

[0005]

[Means for Solving the Problem]A music contents transfer system concerning this invention, Digital player apparatus which can reproduce digital data of two or more musical pieces which are comparatively provided with a desorbed type memory of small capacity, and are stored in this desorbed type memory, Digital filing apparatus of each other which it has a comparatively mass built-in memory, and can save digital data of two or more musical pieces in this built-in memory is connected so that communication is possible, and it is constituted. A capacity data acquisition means in which digital filing apparatus acquires capacity data showing capacity of a desorbed type memory from digital player apparatus here, An individual transfer means which transmits individually digital data of a musical piece specified from a built-in memory to a desorbed type memory of digital player apparatus for every musical piece according to an individual transfer command, A file creation means to create a favorite list file containing capacity data of the desorbed type memory, and to store in a built-in memory about two or more musical pieces individually transmitted to a desorbed type memory of digital player apparatus, According to batch transmission instructions, it is judged whether capacity data contained in a selected favorite list file is below capacity data of a desorbed type memory of digital player apparatus, It has a batch transmission means to transmit those digital data to a desorbed type memory of digital player apparatus collectively about two or more musical pieces contained in a favorite list file judged to be the following.

[0006]In a music contents transfer system of above-mentioned this invention, Digital data of two or more musical pieces is beforehand stored in a built-in memory of digital filing apparatus, and digital data of a musical piece specified from digital filing apparatus to digital player apparatus is transmitted one by one according to a user's operation. Digital data of two or more musical pieces with a selected user is stored in a desorbed type memory of digital player apparatus by this, and it becomes full or full omitting a desorbed type memory. Capacity data showing capacity of a desorbed type memory of digital player apparatus is acquired by digital filing apparatus. Then, about two or more musical pieces transmitted to a desorbed type memory of digital player apparatus, digital filing apparatus creates a favorite list file containing

capacity data of the desorbed type memory, and a name of each music, and stores it in a built-in memory.

[0007]By repetition of the above procedure, two or more favorite list files will be created by built-in memory of digital filing apparatus. Out of a favorite list file of these plurality, the user can choose one favorite list file and can transmit those digital data to digital player apparatus collectively about two or more musical pieces contained in this favorite list file.

[0008]However, when the total data volume of two or more musical pieces contained in a selected favorite list file is larger than capacity of a desorbed type memory of digital player apparatus of the destination, That is, when capacity of a desorbed type memory which it is going to transmit from these is smaller than capacity of a desorbed type memory by which two or more musical pieces contained in a selected favorite list file were stored before, no digital data of musical pieces can be transmitted to a desorbed type memory. Then, digital filing apparatus judges whether capacity data contained in a favorite list file of a selected file name is below capacity data of a desorbed type memory of digital player apparatus according to data transfer instructions, It restricts to the time when it is the following, and those digital data is collectively transmitted to a desorbed type memory of digital player apparatus about two or more musical pieces contained in this favorite list file. As a result, all the musical pieces contained in a selected favorite list file will be stored in a desorbed type memory.

[0009]In concrete composition, to a favorite list file. It is contained by identification data of a desorbed type memory of digital player apparatus, and a batch transmission means, It is judged whether capacity data and identification data which are contained in a selected favorite list file are in agreement with capacity data of a desorbed type memory of digital player apparatus, and identification data, It restricts to the time when it is in agreement, and batch transmission is performed about two or more musical pieces contained in this favorite list file.

[0010]According to this concrete composition, a data transfer is performed only within a case where a desorbed type memory by which two or more musical pieces contained in a selected favorite list file were stored before, and a desorbed type memory which it is going to transmit from these are the same memories.

[0011]In concrete composition, a batch transmission means, Inside of two or more favorite list files stored in a built-in memory, A means to extract 1 or two or more favorite files in which capacity data below capacity data of a desorbed type memory of digital player apparatus is contained, and to display a file name of this favorite file on a screen, It has a means to select two or more musical pieces contained in a favorite file chosen according to operation which chooses one favorite file from 1 currently displayed on a screen, or two or more favorite files as a transfer subject.

[0012]Since a file name of 1 or two or more favorite list files which can restore digital data is displayed on a screen on the occasion of data transfer according to this concrete composition,

a user, Only by choosing one desired file out of a favorite file of these plurality, digital data of all the musical pieces contained in the file can be transmitted to digital player apparatus from digital filing apparatus.

[0013]

[Effect of the Invention]according to the music contents transfer system concerning this invention, a favorite list file is chosen -- it excelling, and, [come out and] Since the digital data of all the musical pieces contained in this file can be transmitted to digital player apparatus from digital filing apparatus, data transfer work is very simple.

[0014]

[Embodiment of the Invention]Hereafter, it explains concretely over a drawing about an embodiment of the invention. The personal computer (2) of each other is connected with a digital memory player (1) with a USB cable (3), and the music contents transfer system concerning this invention is constituted, as shown in drawing 1.

[0015]The desorbed type memory (5) in which the digital memory player (1) should store CPU (4) and the digital data of two or more musical pieces, The decoder (7) which restores to the LCD module (6) which should display various data, and the digital data read from the memory (5), It has a D/A converter (8) which changes into the audio signal of an analog the audio information obtained from a decoder (7), the amplifier (9) which amplifies the output of a D/A converter (8) and is supplied to headphone, and a USB interface controller (10).

[0016]The chip set (12) to which a personal computer (2) serves as CPU (11) from two or more elements on the other hand, It has the display (16) which displays the built-in memory (13) which consists of hard disk drive apparatus, and various information, the display driver (15) which drives a display (16), and the USB interface controller (14). As shown in drawing 5, the digital data of two or more musical pieces is beforehand stored in the memory (13) of a personal computer (2) as a tune data file with a track name and data volume.

[0017]Drawing 2 expresses the procedure for transmission (package preservation) of the musical piece from a personal computer to a digital memory player, and favorite list file creation. If the software of a personal computer is first started after connecting a digital memory player (PD) with a personal computer (PC) with a USB cable at Step S1, In Step S2, the capacity data of a memory is acquired from a digital memory player, and the identification data (ID) of a memory is acquired from a digital memory player in Step S3.

[0018]Next, in step S4, the digital data of the specified musical piece is transmitted to a digital memory player from a personal computer. In transmission, conversion to the data format of a digital memory player of a personal computer from a data format is performed. Then, in Step S5, about the musical piece transmitted to the digital memory player from the personal computer, file information, such as a track name (title), performance time, and data volume (size), is acquired, and the information is saved in a personal computer. Then, when it judges

whether a musical piece is further transmitted to a digital memory player from a personal computer (a user's operation) and is judged as yes at Step S6, it returns to step S4 and transmission of a musical piece and preservation of file information are repeated. As a result, as shown, for example in drawing 5, the digital data of two or more musical pieces transmitted from the personal computer (2) will be stored in the memory (5) of a digital memory player (1) with the track name and data volume of each musical piece.

[0019]Transmission of all the desired musical pieces is completed, and if a user inputs the file name (preservation destination list name) of the favorite list file which comprises a musical piece of these plurality and is judged to be no at Step S6 of drawing 2, it will shift to Step S7. A preservation destination list name can be changed although beforehand set up as a default value. When a user pushes the memory package preservation button (refer to drawing 4) displayed on the screen by the software of the personal computer at Step S7, it shifts to Step S8.

[0020]In Step S8, when a preservation destination list name judges whether there is nothing on the list of personal computers and is judged to be yes, after inputting the list name of the preservation destination in step S9, it shifts to Step S10. In Step S10, the capacity, ID, the aforementioned file information (a track name, performance time, data volume, etc.), and the preservation destination list name of a memory of a digital memory player are saved at the favorite list file of a personal computer, and procedure is ended.

[0021]As a result, in the memory (13) of a personal computer (2). As shown in drawing 5, the file name (favorite name) of a favorite list file, memory space, memory ID, the number of music, and the track name of each musical piece will be stored as a favorite list file about two or more musical pieces transmitted to the memory (5) of the digital memory player (1).

[0022]Then, by changing the memory (5) of a digital memory player (1) to another memory (5'), and performing same operation, It is stored in the memory (5') of a digital memory player (1) by the digital data of two or more musical pieces, and in the memory (13) of a personal computer (2). About two or more musical pieces transmitted to the memory (5') of the digital memory player (1), the file name (favorite name) of a favorite list file, memory space, memory ID, the number of music, and the track name of each musical piece will be stored as a favorite list file.

[0023]When a favorite list file is created, on the display (16) of a personal computer (2). As shown in drawing 4, about two or more created favorite list files with the directory structure of each file. While a track name (title), performance time, data volume (size), and memory ID are displayed, a track name (title), performance time, and data volume (size) are displayed about two or more musical pieces stored in the memory (5) of a digital memory player (1).

[0024]Drawing 3 loads a digital memory player (1) with the initialized memory (5), and expresses the procedure for transmitting the musical piece of a desired favorite list file to this memory (5) (package restoration). If the software of a personal computer is first started after

connecting a digital memory player (PD) with a personal computer (PC) with a USB cable at Step S11, In Step S12, the capacity data of a memory is acquired from a digital memory player, and the identification data (ID) of a memory is acquired from a digital memory player in Step S13.

[0025]Next, when it judges whether there are some whose memory space and ID of a digital memory player correspond with the memory space of a favorite list (backup list) and ID which are created by the personal computer and judged as no at Step S14, Since the favorite list file which should be restored to the memory of a digital memory player does not exist, it is processed as NG. On the other hand, when judged as yes at Step S14, it shifts to Step S15 and the favorite list file name (backup list name) which is registered into the personal computer and which can be restored is displayed on a screen. If a user pushes the memory package restoration button which the user chose one backup list name at Step S16, and also was displayed by the software of the personal computer at Step S17 according to this, In Step S18, the file information (a track name, performance time, data volume, etc.) of the backup list name (favorite list file name) with the selected user which can be restored is acquired.

[0026]And in Step S19, the information (music data and file information) about two or more musical pieces contained in a favorite list file from a personal computer to a digital memory player is transmitted, and procedure is ended.

[0027]As a result, as shown in drawing 5, the digital data of two or more musical pieces stored before will be restored to the memory (5) of a digital memory player (1).If similarly a digital memory player (1) is loaded with initialized another memory (5'), another favorite list file name which can be restored to this memory (5') is chosen and a package restoration button is pushed, the digital data of two or more original musical pieces will be restored to this memory (5').

[0028]Only by according to the music contents transfer system applied to this invention like ****, choosing a desired favorite list file from the list currently displayed on the screen of the personal computer, and pushing a package restoration button, Since all the musical pieces contained in this favorite list file can be restored to the memory of a digital memory player, compared with the former which was transmitting data with careful attention to the memory residue for every music, data transfer work becomes very simple.

[Translation done.]